Assessment of FairPoint's Cutover Readiness Verification Plan DRAFT

Prepared for:

The Staffs
of
the Maine Public Utilities Commission,
the New Hampshire Public Utilities Commission, and
the Vermont Department of Public Service

By:



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Background

On March 31, 2008, FairPoint Communications, Inc. ("FairPoint") closed a transaction with Verizon Communications Inc. ("Verizon") to assume ownership of most of Verizon's wireline business in Maine, New Hampshire, and Vermont. As part of this change of ownership, FairPoint plans to operate with an almost entirely new suite of systems, which will support the operations across the full range of business functions. FairPoint has commissioned Cappemini to develop these systems. FairPoint has entered into a Transition Services Agreement ("TSA") with Verizon, under which Verizon will provide operational support functions for FairPoint until FairPoint is ready to transition ("cutover") to these new systems. FairPoint pays Verizon a monthly fee to provide through the existing Verizon systems and processes the functions that FairPoint will eventually self-supply with the new systems now under development. Pursuant to the TSA, FairPoint must provide Verizon with an irrevocable notice that FairPoint is ready to cutover from Verizon's systems at least 60 days prior to the cutover date. In addition, the cutover date is restricted (by Verizon) so that it may occur only at the end of odd-numbered months (January, March, May, July, September, and November). FairPoint's current schedule projects cutover in September 2008, with the irrevocable notice to be provided in July 2008.

During the regulatory proceedings in Maine, New Hampshire, and Vermont to obtain approval for this transaction, a number of parties raised concerns that failures in the transition from Verizon to FairPoint systems can produce adverse customer impacts, such as those that had occurred during a similar transaction in Hawaii. In response to these concerns, all three states imposed as a condition of approval of the transaction that careful monitoring of the cutover process be performed by an independent third party. The staffs of the Maine Public Utilities Commission, the New Hampshire Public Utilities Commission, and the Vermont Department of Public Service engaged the Liberty Consulting Group ("Liberty") to fulfill this role.

As part of this engagement, Liberty was asked to submit a series of reports:

- 1. A monthly status report of FairPoint's progress.
- 2. A review and assessment of FairPoint's planned testing and cutover readiness verification process.
- 3. A pre-cutover readiness review and assessment.
- 4. A post-cutover review.

Liberty began providing the monthly status reports (item 1) in December 2007, and these reports have been made publicly available on the New Hampshire and Maine Public Utilities Commissions' websites. The present report addresses the second reporting requirement. As specified in the statement of scope for this engagement ("Scope Statement"), Liberty is supplying this report in draft form for public comment. Liberty will review any comments received in the three states and then issue a final review and assessment of FairPoint's planned testing and cutover readiness verification process.

The Scope Statement specifically provides for the following components of this assessment:

- Review the systems testing strategy
- Review the systems testing plans

- Review the specific test cases
- Review the expected outcome of the test cases
- Review the testing acceptance criteria
- Analyze the testing strategy and plans for adequacy, feasibility, and comprehensiveness in addressing all necessary functions moving from Verizon to FairPoint
- Review the testing acceptance criteria for adequate classification and disposition of outcome defects (severity 1, severity 2, etc.). Analyze the test cases for completeness and accuracy in addressing the necessary functions
- Review staffing requirements and plans
- Review system training plans and schedules, both for FairPoint personnel and wholesale customers
- Review notice and readiness timetables given to wholesale customers for adequacy and reasonableness
- Notify FairPoint of issues and concerns exposed in the review and recommendations for FairPoint action
- Identify the key business processes and associated test criteria that FairPoint must use to demonstrate cutover readiness. Successful performance on these key test criteria by FairPoint should be necessary (although not necessarily sufficient) for proceeding with the final cutover.

The Five Key Components of a Cutover Readiness Plan

Liberty believes that five key components must be operating successfully at cutover and therefore must be addressed in a sufficient cutover readiness verification plan:

- 1. Operational support systems for all business functions (*e.g.*, ordering, provisioning, customer relationship management, maintenance and repair, billing, finance, human resources management);
- 2. Conversion of the data associated with all these business functions from the Verizon to the FairPoint systems (*e.g.*, billing records, network equipment inventory records, customer accounts, employment records for transferred employees);
- 3. Detailed definition of the processes associated with all these business functions;
- 4. Staffing to support all necessary business functions; and
- 5. Training of the staff in the new business processes and the use of the new operational support systems.

For each of these components, the plans must specify in detail the individual tests and metrics that will be applied. In addition, the plans must specify the acceptance criteria to be applied to these tests and metrics.

This report examines each of the five components and assesses the sufficiency of the tests and metrics for each and the criteria for success FairPoint has proposed to apply to them. Appendix A, which Liberty will be referring to in this report, is a document prepared by FairPoint that displays FairPoint's proposed acceptance criteria in each of the five categories. Liberty notes that some of the dates shown in this appendix are no longer applicable.

Component One: Operational Support Systems

Capgemini is in the process of developing and testing systems to support FairPoint's operations across the full range of telecommunications functions. In particular, these systems support such functions as:

- Finance
- Human Resources
- Supply Chain Management
- Billing
- Customer Relationship Management
- Order Management
- Wholesale Customer Interface
- Provisioning and Service Activation
- Inventory Management
- Maintenance and Repair
- Work Force Management
- Network Database Management (E911, Line Information Database, etc.)
- Network Monitoring
- Call Center Management
- Operator Services
- Regulatory Reporting
- Other required specialized functions (Internet Service Provider provisioning, Payphone, etc.).

Capgemini and FairPoint have used the Enhanced Telecom Operations Map ("eTOM") model, which was developed by the TeleManagement Forum, to assure full coverage of all the necessary telecommunications functions. Some of these functions can operate in isolation; however, most telecommunications processes and transactions will cross a number of functions. Capgemini has developed a hierarchical strategy to test the software. This strategy begins with unit testing within an individual system application, and then builds to cross-functional testing between systems. Capgemini has therefore assembled a large team whose sole purpose is to test the operations support systems software developed by Capgemini or by other outside vendors contracted by FairPoint

Capgemini's test plan includes three types of tests: functional testing, performance testing, and user acceptance testing ("UAT"). FairPoint and Capgemini also plan to conduct business simulation tests, which relate to UAT, but these tests will be discussed in the business process section below. The most extensive testing type is the functional testing, which is intended to test as much as possible all specific detailed functions to be performed by the systems either in isolation or working together as needed for an end-to-end process such as new service provisioning. The performance tests are meant to test the systems' response times under load conditions, and the UATs are meant to assure that the systems properly perform the required business functions and that the ultimate users of the systems can successfully navigate them. Performance testing and UAT do not attempt to exercise every possible function, but instead are based on a subset of the functional test cases.

The functional testing uses the following hierarchy of tests:

- 1. <u>Unit Tests</u>. These are tests of individual components of an application. They are typically performed by the systems developers rather than the testing team.
- 2. <u>Product Tests</u>. These are tests of whole applications; for example, finance, ordering, or billing. These are tests of applications in isolation; therefore, the inputs will often be "stubs." That is, they are artificial simulations of data that would normally be supplied by another application. As an example, a test of the billing application might include "stubbed" customer account data that would normally be supplied by the customer relationship management database.
- 3. <u>Shakeout Tests</u>. These are initial tests of the connection between applications to determine whether they can communicate with each other. That is, some of the stubbing is removed to assure that data flows properly across interfaces between the systems.
- 4. <u>Integration Tests</u>. These are tests of the system interfaces; for example, ordering to provisioning, billing to finance, and trouble administration to workforce management.
- 5. <u>System Tests</u>. These are tests of transaction flows across multiple systems and interfaces; for example, ordering to work force management to provisioning to billing. The system tests includes the all important end-to-end ("E2E") tests, which trace a transaction from the initiation through all the downstream systems affected; for example, beginning with order entry and ending with all the affected systems, such as inventory management, billing, finance, and database updates (including operator services, E911, etc.).

To date, Capgemini has produced approximately 1000 system test cases and thousands more test cases at the lower levels of the testing hierarchy. To create these test cases, Capgemini began with "use cases," which describe a basic functionality, such as ordering of a single-line residential POTS service with features. The test cases represent specific instances of these use cases, such as ordering the single-line POTS service with call forwarding. These test cases include those with both "positive" and "negative" results; that is, the test cases set includes both cases designed to lead to a correct result or ones with errors deliberately introduced to make sure that the systems can properly detect and process the errors.

The Capgemini testing team performs functional tests above the unit testing level. The UATs are designed to be performed by actual FairPoint users of the systems under the guidance of the Capgemini testing team. There are two types of UATs: silo UAT and integrated UAT. Silo UAT is designed for testing isolated applications; the integrated UAT is designed to test the suite of systems needed to complete specified business processes. For both silo and integrated UAT, Capgemini and FairPoint use a selected subset of the functional test cases.

A special set of test scenarios that might be considered a type of UAT are the CLEC tests. These are tests performed either by volunteer CLECs using the FairPoint wholesale GUI interface application or by CLECs seeking certification for establishing an e-bonded connection with the FairPoint wholesale interface. FairPoint has provided for these tests a set of test scenarios covering a wide range of CLEC functions, from which the CLECs will choose a subset to include in their tests. FairPoint has also been holding monthly meetings with the wholesale carriers since November 2007, and Liberty has attended them. At these meetings, among other areas of interest to the wholesale carriers, FairPoint has provided information on and received and responded to input from the carriers about cutover status and the status of test plans and schedules. FairPoint has also provided information from these meetings and specific testing and training schedules on its wholesale website. In addition, the FairPoint wholesale account team has been in direct contact with the carriers to discuss their interface requirements, testing requirements, and other concerns. Liberty believes that through these means, FairPoint has provided adequate notice to the wholesale community about the cutover process and the testing plans and schedules.

There are also two types of performance tests: Application Performance Tests ("APTs"), which assess the performance of individual applications, and Integrated Performance Tests ("IPTs"), which address the performance of the integrated applications working together to process transactions. To determine the transaction volumes appropriate to these tests, Capgemini has created a performance model based in part on actual volumes that the systems are expected to experience in real operations. Capgemini derived the volumes by using historical Verizon data. The model allows the volumes to be varied to simulate both normal and peak volume situations and to simulate stress conditions for the systems.

The system functional tests, especially the E2E tests, and the related integrated UAT, CLEC tests, and IPTs are of crucial importance. Liberty has therefore focused its analysis principally on these tests and has been reviewing test cases and providing feedback to Capgemini and FairPoint since last fall. Both FairPoint and Capgemini have been cooperative in responding to Liberty's observations and continue to make modifications and additions based on concerns Liberty has raised. Liberty has now been provided information on nearly 85 percent of the planned system test cases. The set of test cases that have been presented to Liberty are extensive; however, they remain incomplete in a few areas. In particular, there are no test cases yet that address:

- 1. Ordering, provisioning, and billing of complex products for both retail and wholesale customers (such as ISDN-PRI, Centrex, private line services, UNE products with greater than voice grade capacity, and Feature Group D trunk groups)
- 2. Engineering work orders
- 3. Carrier access billing

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- 4. Daily usage feed ("DUF") and meet point billing
- 5. Wholesale usage
- 6. Performance reporting
- 7. Operator services
- 8. Payphones
- 9. E911 database management in Maine
- 10. Complex directory listings
- 11. Lifeline and link-up services
- 12. Central office equipment inventory process.

In addition, there are not enough test cases with expected negative results (e.g., errors and inconsistencies). There are also not enough test cases or steps within some test cases to assure complete coverage in some functional areas. For example, there may be a test case for provisioning POTS for a new customer but none for the provisioning of some other services or there may be no steps in the these test cases to validate that the network databases have been updated to reflect this provisioning. Cappemini has concurred that these test case gaps need to be filled and are working to do so, with a projected completion date of May 30, 2008.

As noted, in addition to defining the detailed readiness tests to be executed, a complete cutover readiness verification plan must specify what test results are acceptable to demonstrate cutover readiness. Appendix A shows FairPoint's proposed acceptance criteria for the tests. As detailed there, key elements of the acceptance criteria for software testing include:

- 1. A requirement for the completeness of test case execution.
- 2. A definition of the significance or "severity level" of the failure of a test case and how that severity level is determined.
- 3. A specification of the acceptable number of failures by severity level.
- 4. A specification of the acceptable level of manual workarounds for those failures that require manual workarounds to complete a business process.
- 5. A plan for correcting the software to fix the defects identified through the testing process.

Capgemini and FairPoint have defined five different severity levels for defects: level 1 – critical, level 2 – high, level 3 – moderate, level 4 – low, and level 5 – enhancements. Liberty has reviewed the definition of these classifications, has commented on earlier versions, and believes the current definitions as shown on p. 4 of Appendix A are acceptable. Liberty also concurs with the process shown on p. 5 of the appendix for determining the severity levels. As the testing continues, Liberty plans to review the severity levels for all remaining defects that exist at the time that FairPoint believes it has met the acceptance criteria and is ready to issue its notice of readiness to Verizon. Liberty will also observe a sample of the live system and UAT testing to verify that the test cases are being executed as planned.

Given these severity level definitions, the acceptance criteria for the system tests, CLEC tests, UAT, and performance tests, as shown on pp. 6-9 of Appendix A, are:

- 100 percent of the test cases defined will be executed before providing the notice of cutover readiness
- There will be no open severity 1 defects (*i.e.*, all severity 1 defects will be resolved) and no open severity 2 defects without acceptable manual workarounds
- The effect of the manual workarounds will be cumulated across all nonperformance software testing (systems, UAT, and CLEC) and will not exceed an incremental headcount of 50
- All open defects will be assigned target dates for correcting the software
- Any required manual workarounds will be tracked for methods and procedures development.

Liberty concurs, subject to the clarifications noted below, that these are appropriate and sufficient acceptance criteria for the software tests. They should provide a sufficiently stringent testing of FairPoint's systems, after the test cases suite has been fully defined. Liberty also concurs that it is important to place a limitation on the total amount of allowed manual workarounds that result from all the testing defects. This constraint will help to minimize customer impact. It means that if there are several defects requiring manual workarounds, they must be sufficiently minor so that the total incremental additions to the workforce across all the defects cannot exceed the limit. Liberty notes that a headcount of 50 is a reasonable constraint, because it represents only about 1.5 percent of the total FairPoint workforce. Liberty also notes that these manual workarounds must be "acceptable." This issue is important because some manual processes, although possible, would have unacceptable customer impacts. An example might be manual processing of updates to the retail bills resulting from service order activity. Liberty will review all manual workarounds that are defined, in order to assure that we concur that: (a) they are truly acceptable workarounds from a customer impact perspective; and (b) adequate methods and procedures have been developed to support the manual processes.

As further clarification, Liberty notes that the input for the system testing, as noted on p. 6 of the Appendix, includes the requirement for successful completion of product and integration tests. Liberty believes this point is important and cannot be neglected. Not all functions supported by the newly developed software applications can or should be tested through the system test cases. The lower level product and integration tests provide a more thorough exercise of the full extent of the application functionality than the system tests can. Also, some functions are performed entirely within an application or only cross a single interface between applications. These functions are therefore more appropriately tested at the product or integration test level. Examples include a number of financial and human resources process and the interface between the FairPoint network management system and the FairPoint trouble reporting system. Therefore, Liberty understands that the condition for 100 percent execution of the test cases should encompass not only the test cases that are explicitly "system" test cases but also the lower level product and integration test cases. Likewise, the limitation on the severity levels and the manual workarounds should be understood as encompassing those defects uncovered as part of the product and integration tests as well as the system tests.

To summarize Liberty's observations about the operations support systems testing, Liberty believes that FairPoint has defined a sufficient set of acceptance criteria subject to the following open needs:

- Liberty's review of the complete and final definition of all the systems test cases that have not yet been finalized
- An understanding that 100 percent of the product, integration, and systems test cases need to be executed and the results must be subject to the conditions on severity level and manual workarounds.

Component Two: Data Conversion

The next key aspect of cutover readiness is an assurance that all Verizon systems' data necessary for FairPoint to operate the business will be properly transmitted and placed into the new FairPoint systems and databases at cutover. The data conversion process consists of the following steps:

- Verizon's extraction of the data from its systems into text files
- "Landing" of the Verizon data extract text files into a temporary landing database
- Transformation of the landed data into formats required by the FairPoint replacement systems and storage of the transformed data in temporary "staging area" databases
- Loading of the data from the staging area into the final destination application databases in the new FairPoint systems.

FairPoint and Capgemini recognize that data extracted from multiple Verizon source systems will often need to be merged into a single destination FairPoint system. This process often requires choices about which data to use when multiple source systems are inconsistent, as sometimes happens. In addition, FairPoint may not need to use all the data that Verizon transmits, because it may be difficult in all cases for Verizon to identify or isolate the specific data that FairPoint needs. Similarly, FairPoint may need to override some of the data received from Verizon so that it is usable in the FairPoint systems. Finally, it is important to note that some data in the Verizon systems may be erroneous. No data conversion process can account for this latter effect. FairPoint will need to accept that data as provided by Verizon and then implement a data cleansing process after cutover to deal with source-data errors. The purpose of the data conversion process at cutover is restricted to assuring that the useful and necessary data as transmitted by Verizon are properly transformed and placed in the new destination FairPoint systems rather than assuring that the data that Verizon transferred was correct.

Capgemini has established a data conversion team responsible to assure accurate conversion and transmission of data into the application databases. The data conversion team has developed automated tools to provide the necessary data transformations into the staging area databases. FairPoint has already obtained two trial data extracts from Verizon. The first came on August 31, 2007, and the second on February 29, 2008. The data conversion team has been using these extracts to test the data conversion tools and to produce data mock-ups to be used for testing the application software. A series of eight data mock-ups are planned, with more of the extracted data added to the target databases in each data "mock." Mock 8, which is currently scheduled for

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completion on June 20, 2008, is planned to include a full set of all the test data from the February data extract. The final data extract from Verizon will be the production data that FairPoint will obtain at cutover.

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Capgemini is using three different strategies for testing the data conversion:

- 1. Specific test cases of the data conversion routines.
- 2. Successful operation of the operation support systems test cases using the converted data.
- 3. Reconciliations of data before and after transmission and conversion.

The data conversion test cases were written especially to test data conversion routines and to verify at the data field level that the data has been properly converted. As with the operations support systems test cases, described in the last section, these test cases are written and applied at the unit, product, and integrated testing levels. This testing also includes execution of "sanity" tests that check that the converted data can be found, accessed, and used in the destination systems.

In addition to executing the data conversion test cases, Cappemini executes the operation support systems test cases by using the mock-up data from the test data extracts obtained from Verizon. That is, the operation support systems test cases test the operation support systems software, and also assure that the converted data is useable in the target FairPoint systems. They also test whether there are any inconsistencies in the data content and formats among the various destination systems; for example, customer relationship management, ordering, billing, and network

The data reconciliations refer to cross comparisons of the data before and after the various steps in the process of loading the converted data into the destination databases. The reconciliation consists of comparing counts before and after each step of the process:

- Verizon source data extracts to the landing database
- The landing database to the staging databases
- The staging databases to the destination databases.

In addition, Cappenini cross-compares destination databases to assure data consistency among them where appropriate (*e.g.*, customer relationship manager and billing).

Liberty's examination of Capgemini's data conversion testing approach consisted of a review of a sample of the data conversion test cases and the sanity test cases. As already noted in the operations support systems section of this report, Liberty reviewed the operations support systems test cases and provided its comments on them. Finally, Liberty reviewed the list of data reconciliation cross comparisons that Capgemini is using.

FairPoint's proposed acceptance criteria for data conversion are shown on p. 10 of Appendix A. The criteria are similar to those proposed for systems software testing:

- 100 percent of the data conversion test cases will be executed before providing the notice of cutover readiness
- There will be no severity 1 defects and no severity 2 defects without acceptable data correction tasks defined
- Any required manual data correction tasks will be tracked for methods and procedures development
- Use of the target systems capacity will not exceed 70 percent after loading the converted data.

Liberty believes that FairPoint's and Capgemini's data conversion validation approach and acceptance criteria are sound. However, as with systems software testing, a few elements in the approach need further definition. In particular, Liberty understands that there is not yet full agreement between FairPoint and Verizon on a set of cross comparisons that will be conducted between the source Verizon systems and the FairPoint landing database. The source-to-landing step is an important one in the data transmission and conversion process. Liberty would like to assure that this step will be properly monitored before it can make a final assessment of the FairPoint-Capgemini data conversion validation plan.

Component Three: Business Process Definition and Mapping

Prerequisites for a successful cutover include a full complement of working and tested systems and a complete set of transformed and properly loaded data on which the systems can rely. However, these prerequisites are not in themselves sufficient to assure a successful cutover. The systems must operate within the context of processes through which FairPoint operates the business. Therefore, it is important to determine whether these processes are in place and whether the new systems properly support these processes. For example, despite FairPoint's and Capgemini's best efforts to maximize the number of orders that can flow through to provisioning and billing without human intervention, not all orders can do so. Some orders that are more complex will be designed to fall out of the automated flow for manual processing and errors or other unexpected events can cause simpler orders to fall out. As a result, business processes need to be established to assure smooth order processing when this occurs. In addition, a FairPoint employee must manually process these orders. Part of the purpose of the UAT testing described above is to make sure the systems properly align with the business processes.

Each FairPoint team (*e.g.*, network operations, customer relations, engineering, wholesale, finance, human resources) is identifying and developing processes, policies, methods and procedures, and scripts appropriate to its operations. These teams rely on the knowledge and experience of the team members, the generic eTOM model for telecommunications operations, and an analysis of functions provided by Verizon through the TSA as resources for the work. Senior management will review the key processes and those that interact with systems will be tested as part of UAT. In addition, FairPoint plans to conduct business simulation testing with the systems as an adjunct to the UAT. This testing will be less "scripted" than UAT. The testers will not follow specific step-by-step procedures but instead will be presented with a business problem to solve using the systems and business process definitions. As part of its analysis of the

business process definition and mapping requirements, Liberty has sought and reviewed early versions of the business process documentation.

FairPoint's proposed criterion for acceptable business process definition and mapping to demonstrate cutover readiness is shown on p. 13 of Appendix A:

• 100 percent of <u>key</u> policies, processes, methods and procedures, and scripts will be documented, reviewed, and approved by senior management or their designee before a readiness notice is given.

Liberty concurs that FairPoint's proposed acceptance criterion is sufficient. Liberty notes that FairPoint restricts the criterion to "key" policies, processes, method and procedures, and script, and recognizes that the determination of what is "key" is subjective. However, many processes are less crucial to the successful operation of the business and have limited impact on customers. In contrast, some processes, like those for successful processing of orders, are crucial. Liberty's assessment of whether FairPoint has met the business process acceptance criterion will include an evaluation of whether FairPoint has correctly identified the key processes and that these processes are properly documented, reviewed and approved. At a minimum Liberty expects that these key processes will include those that can have significant customer impacts, such as:

- Billing
- Call Center Management
- Customer Account Management
- Order Management
- Wholesale and Intercarrier Operations
- Network Engineering and Operations
- Information Systems Support
- Critical Service Support (e.g., E911 and other emergency services)
- Disaster Response

Component Four: Staffing

FairPoint must also have sufficient staff to assure adequate operation of the business processes. Two categories of staffing must be considered. Most business operations will be performed by organizations that transferred from Verizon at the close of the transaction at the end of March. Approximately 2700 positions fit into this category. However, some functions were performed by Verizon in a centralized location outside of the three northern New England states; those must be replaced by FairPoint with new staff. These positions include those providing functions that Verizon is supplying now through the TSA. FairPoint has estimated that about 675 positions fit into this category.

Both staffing categories must be considered in assuring sufficient staffing. Although approximately 2700 positions transferred to FairPoint at close, not all of these positions were filled, partly because of retirements and resignations of some Verizon employees prior to the

close of the transaction. Furthermore, the impact of these open positions has not been similar across all organizations. As a result, FairPoint is engaged in an assessment to determine how many of the open positions it needs to staff. The 675 new positions present a somewhat different challenge; they represent organizations that, in most cases, need to be created from scratch. In both categories, FairPoint faces the challenge of identifying candidates, and hiring and assimilating a large number of new employees in a very short time.

In assessing the staffing requirements, Liberty has been reviewing the status of FairPoint's staffing on a monthly basis. Liberty has also been reviewing FairPoint's staffing plans. Liberty recognizes that it may not be necessary for FairPoint to fill all of these positions by cutover and certainly not by the time it must declare cutover readiness, two months before the cutover date.

FairPoint's proposed cutover acceptance criterion for staffing is shown on p. 12 of Appendix A:

• 100 percent of <u>key</u> positions are filled before the readiness notice is given.

Liberty concurs that FairPoint's proposed acceptance criterion is sufficient, but as with the business process readiness criterion, an important issue will be to define "key." FairPoint is in the process of identifying such positions and is taking into account the necessity of providing sufficient quality of service for the projected business volumes and of meeting various service-level commitments stipulated as part of the regulatory approvals of the transaction. FairPoint will also use the business process definitions to help determine the extent of manual processes needed to help determine the necessary staff size at cutover. As part of its assessment of whether FairPoint has met the staffing acceptance criterion, Liberty will evaluate whether FairPoint has correctly identified the key positions that must be staffed at the time cutover readiness is given.

Component Five: Training

The last important component of a successful cutover is adequate training in the use of the new systems. FairPoint has devoted significant effort to designing and developing training programs for employees in all organizations that will be using the new systems. These plans include schedules that stagger the classes over time, in order to assure adequate coverage of the business operations while employees are in class. FairPoint will also hire temporary employees to backfill employees who are in training. FairPoint has hired an experienced outside vendor, United Information Technologies ("UIT"), to teach the courses, and has been identifying and securing training facilities and locations at which to hold the courses. Verizon has used UIT for its internal training programs; therefore a number of the FairPoint employees who have transferred from Verizon are familiar with their work. FairPoint has already begun "train-the-trainer" sessions to educate the trainers in the use of the new systems.

In addition to the training courses for employees, FairPoint is developing courses for wholesale users of the new systems. These courses include both live and web-based curricula.

In assessing FairPoint's training approach, Liberty has examined drafts of the training plan and held meetings with the training organization and with representatives from UIT. Liberty has also reviewed early drafts of training material.

FairPoint's proposed acceptance criteria for training are shown on p. 11 of Appendix A:

- 100 percent of the train-the-trainer courses will be executed and approved before providing the notice of cutover readiness
- The final version of the training documentation will be delivered, reviewed, and approved by FairPoint's management team
- The courses planned to have been conducted before the date of providing the notice of cutover readiness will have been completed with 90 percent of students demonstrating proficiency in the use of the systems
- There will be sufficient time for the remaining courses to allow for additional training if needed.

Liberty concurs that these proposed acceptance criteria are sufficient, provided that the conditions are such that they can be properly applied. The most current training plan Liberty has reviewed requires only very few courses to have been completed by the planned July date for announcing cutover readiness. Moreover, those courses that are planned for that time period do not provide coverage of all the key business organizations and processes. Nevertheless, Liberty fully recognizes that it makes little sense to administer training too early, because the students are at significant risk of forgetting what they have learned by the time the systems they will use are available. Therefore, Liberty has proposed to FairPoint that it amend the training plan so that a few employees in all the key organizations will have completed training by the time of cutover readiness, with provision to retrain these employees as necessary as the cutover date approaches. This will allow the effectiveness of the training to be assessed prior to the cutover readiness notification. Liberty believes FairPoint will use this approach, but until plans are in place to do so, Liberty can only provide conditional concurrence with the proposed training acceptance criteria.

Summary and Overall Assessment

Liberty has concluded that FairPoint has considered all the important aspects of cutover readiness including:

- 1. Operation support systems
- 2. Data conversion
- 3. Business process definition and mapping
- 4. Staffing
- 5. Training.

Furthermore, FairPoint has identified at a high level acceptance criteria that are sufficient for determining readiness in each of these five categories. However, in a few limited areas FairPoint has yet to provide Liberty the details necessary to demonstrate that these acceptance criteria will be sufficiently complete. In particular,

• For operation support systems readiness, FairPoint and Capgemini should

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- Provide a complete set of system test cases to Liberty for review. At this
 point Liberty has only seen approximately 85 percent of those test cases.
- Agree that in addition to the systems test cases, 100 percent of the product and integration test cases need to be executed and the results of these test cases must be subject to the defined conditions on severity level and manual workarounds.
- For data conversion readiness, FairPoint, Capgemini, and Verizon must agree on a mutually acceptable set of cross comparisons between the source Verizon programs and the FairPoint landing database.
- For training readiness, FairPoint needs to provide Liberty with a training plan that assures a sufficient number of completed training courses prior to declaration of cutover readiness.

Liberty notes that FairPoint and Capgemini have provided full cooperation in connection with Liberty's reviews, requests, and questions. They have also been very responsive to Liberty's observations and recommendations. Liberty is therefore optimistic that these remaining gaps will be filled. After Liberty has received the input necessary to evaluate these areas, Liberty will issue a supplement to this report, providing its evaluation.

Some of the acceptance criteria include subjective aspects; as part of its analysis as to whether FairPoint has met these criteria, Liberty will examine whether FairPoint and Capgemini have appropriately applied the criteria. In particular, Liberty will investigate whether:

- The manual workarounds proposed to address any systems failures are acceptable, particularly with respect to potential customer impact
- The severity levels of test failures have been properly applied
- FairPoint has properly identified those processes that are key processes for application of the business process acceptance criterion
- FairPoint has properly identified those positions that are key positions for the application of the staffing acceptance criterion.

Appendix A

FairPoint's Proposed Cutover Readiness Acceptance Criteria